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10/611,752	07/01/2003	Olivier Cohu	ICH 296-US	5032

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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/611,752

Applicant(s)

COHU, OLIVIER

Examiner

William P. Fletcher III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 19 August 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 19 August 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Objections*

2. Claims 12 and 13 are objected to because of the following informalities: “silicium dioxide” should, apparently, read “silicon dioxide.” Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The recitation of “specific surfaces,” which renders the claim indefinite. This term is not defined by the claim and it is unclear what the nature of the specificity of the surfaces is or the criteria that need to be met for the surfaces to be “specific.” Consequently, it is impossible to determine the metes and bounds of the claimed invention.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**6. Claims 1-5, 7-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitamura et al. (EP 1 120 281 A1).**

With respect to claim 1, this reference teaches a method of manufacturing an ink jet recording material. The method comprises coating a moving web with a coating solution containing one or more nano-crystalline, nano-porous inorganic compounds in a binder, together with boric acid. Numerous working examples teach concentrations of the inorganic compounds within applicant's claimed range. Boric acid, in addition to being one of applicant's explicitly-disclosed "gelation-promoting" ingredients, is taught by Kitamura as increasing the viscosity of the coating composition, which meets applicant's definition of a "gelation-promoting ingredient." See the abstract, 5:49-54, 6:12-51, 7:27-31, 8:3-4, and paragraphs 76, 142, 143, and 147, as well as the working examples.

With respect to claim 2, since the boric acid is part of the coating composition, it is applied simultaneously therewith.

With respect to claim 3, Kitamura teaches that the layer may be the uppermost layer of a multilayer ink jet recording medium (para. 41).

With respect to claim 4, because Kitamura teaches the same binder materials as applicant, including PVA, it is the examiner's position that Kitamura's binder exhibits non-thermo-reversible gelling behavior (paras. 69-70).

With respect to claim 5, as noted above, Kitamura teaches boric acid as the gelation-promoting ingredient.

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With respect to claim 7, Kitamura teaches that the web substrate may be various papers or resinous materials (page 13).

With respect to claim 8, as noted above, Kitamura teaches that the coating is the ink-receiving layer of an ink jet recording medium.

With respect to claims 9, 10, and 12, Kitamura teaches that the inorganic compound may be gamma-alumina and/or silicon dioxide (para. 58).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al., as applied to claim 1 above, further in view of Ashida et al. (JP 2001-096900 A, machine translation attached).**

The teaching of Kitamura is detailed above.

This reference does not explicitly state that the coated substrate is cooled to 10°C or less after coating and before drying.

Ashida teaches that for ink jet recording media including inorganic particles, such as silica, cooling the sheet to 20°C or less before drying greatly improves the transparency thereof when the recording medium is desired to be used as an overhead projector sheet (paras. 4, 5, and 9).

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It would have been obvious to one of ordinary skill in the art to modify the method of Kitamura so as to cool the coated substrate before drying so as to achieved improved transparency thereof, as taught by Ashida.

9. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al., as applied to claim 8 above, further in view of Inoue et al. (US 6,620,508 B2).**

The teaching of Kitamura is detailed above.

This reference does not explicitly state that the inorganic particles include those from the lanthanide series in the claimed ratio.

Inoue teaches that silica-based inorganic particle compositions including ceria may be incorporated into ink jet recording layer compositions giving improved ink absorption, transparency, etc. (col. 6).

Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Kitamura so as to incorporate ceria into the coating composition so as to yield a coating with the improved properties disclosed by Inoue.

With respect to the claimed concentration, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. See MPEP 2144.05.

10. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al., as applied to claim 12 above, further in view of Chapman et al. (US 6,841,609 B2).**

The teaching of Kitamura is detailed above.

This reference does not explicitly state that the silicon dioxide particles are positively charged.

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Chapman teaches that, in ink jet recording compositions, use of charged silica particles prevents the agglomeration thereof (13:58-68).

Since Kitamura is concerned with limiting the agglomeration of the silica (paras. 98-101), it would have been obvious to one of ordinary skill in the art to modify the method of Kitamura so as to incorporate positively-charged into the coating composition so as to yield a coating having less agglomeration.

**11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al., as applied to claim 1 above, further in view of Miyamoto et al. (JP 58-177390 A, reference made to the English language abstract).**

The teaching of Kitamura is detailed above.

This reference does not explicitly state that the composition forms and electrically active/conductive layer.

Miyamoto teaches incorporating an electrically conductive material into an ink-jet recording composition in to give an electrically conductive coated substrate.

Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Kitamura so as to incorporate an electrically conductive material into the ink jet recording composition so as to yield an electrically conductive ink jet recording medium, as taught by Miyamoto.

***Allowable Subject Matter***

12. Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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13. The following is a statement of reasons for the indication of allowable subject matter: the prior art neither teaches nor suggests the method of claim 14 wherein the inorganic compound is selected from the species claimed.

***Conclusion***

14. The prompt development of clear issues in the prosecution history requires that applicant's reply to this Office action be fully responsive (MPEP § 714.02). When filing an amendment, applicant should specifically point out the support for any amendment made to the disclosure, including new or amended claims (MPEP §§ 714.02 & 2163). A fully responsive reply to this Office action, if it includes new or amended claims, must therefore include an explicit citation (i.e., page number and line number) of that/those portion(s) of the original disclosure which applicant contends support(s) the new or amended limitation(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

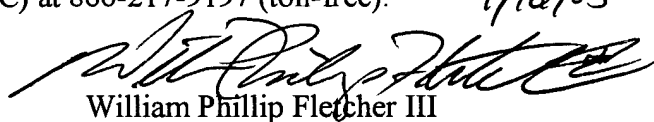
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/16/05



William Phillip Fletcher III  
Patent Examiner, USPTO  
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